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Study of vibro-acoustic properties of composite materials based on polyurethane injection

Vakhitova S., Shaehova I., Zharin E.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

Modern standards of noise and vibration make the manufacturers of vehicles, machines and construction materials take into account the high demands in the design process. Often there is a need both in vibrations absorbing and in effective sound absorbers. Therefore there was a research on the concentrations of matrix components, fillers and modifiers impact on the absorbing and elastic properties of the polyurethane composites. The evaluation of sound-absorbing and elastic properties was in determination of sound absorption coefficient Cs and dynamic elasticity modulus Ed of developed composite materials. The aim of this work is to study changes in the properties of composite materials based on polyurethane matrix to identify compounds with the highest sound absorption and vibration absorbing properties simultaneously.

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